

**REMARKS**

The Official Action mailed May 29, 2003, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to September 5, 2003. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on September 15, 1999; December 16, 1999; April 17, 2000; December 11, 2001; December 21, 2001; March 11, 2002; September 26, 2002; and January 31, 2003.

Claims 1-6, 8-20, 22-34, 36-48 and 50-167 were pending in the present application prior to the above amendment. Claims 6, 13, 20, 27, 34, 41, 48, 55, 67, 78, 89, 100, 111, 122, 133, 144, 155 and 166 have been canceled, claims 66, 77, 88, 99, 110, 121, 132, 143, 154, 165 and 167 have been amended to better recite the features of the present invention, and new claims 168-170 have been added to recite additional protection to which the Applicants are entitled. Accordingly, claims 1-5, 8-12, 14-19, 22-26, 28-33, 36-40, 42-47, 50-54, 56-66, 68-77, 79-88, 90-99, 101-110, 112-121, 123-132, 134-143, 145-154, 156-165 and 167-170 are now pending in the present application, of which claims 1, 8, 15, 22, 29, 36, 43, 50, 57-60, 68-71, 79-82, 90-93, 101-104, 112-115, 123-126, 134-137, 145-148 and 156-159 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraphs 4-12 of the Official Action dated December 5, 2002, reject claims 1-6, 8-20, 22-34, 36-48, and 50-167 as obvious based on the combination of various references as follows: at ¶4, either JP 04-219647 to Miyamoto or JP 04-355228 to Hirayama et al., U.S. Patent No. 4,897,829 to Ikoma et al., and either JP 63-275037 to Shinohara et al. or U.S. Patent No. 5,182,132 to Murai et al.; at ¶5, either Miyamoto or Hirayama, Ikoma, either Shinohara '037 or Murai, and either JP 01-184722 to Shinohara et al., or U.S. Patent No. 5,275,850 to Kitoh et al.; at ¶6, U.S. Patent No. 5,351,229 to Brezoczky et al., Ikoma, and either Shinohara '037 or Murai; at ¶7,

Brezoczky, Ikoma, either Shinohara '037 or Murai, and either Shinohara '722 or Kitoh; at ¶8, JP 02-064939 to Aoyanagi et al., and "Optical Recording: A Technical Overview," pp. 132-139 (©1990), to Marchant; at ¶9, JP 63-003077 to Kugimiya, Marchant, and JP 04-265516 to Mitsuhiro; at ¶10, Aoyanagi and Ikoma; at ¶11, Kugimiya, Ikoma, and Mitsuhiro; and at ¶12, Kugimiya, Ikoma, Mitsuhiro, and JP 01-270596 to Iio et al. The Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present invention.

As stated in MPEP §§ 2143-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 1, 15, 29, 43, 57, 59, 68, 70, 79, 81, 90, 92, 101, 103, 112, 114, 123, 125, 134, 136, 145, 147, 156, and 158 recite "wherein said hard-carbon coating contains silicon and phosphorus." Independent claims 8, 22, 36, 50, 58, 60, 69, 71, 80, 82, 91, 93, 102, 104, 113, 115, 124, 126, 135, 137, 146, 148, 157, and 159 recite "wherein said hard-carbon coating contains silicon

and phosphorus at a concentration of 20 atomic% or less.” The prevent invention teaches that a hard-carbon coating containing silicon and phosphorus makes it difficult to charge with static electricity (see p. 5, lines 22-25). The static electricity tends to make pinholes in a thin film.

The Applicants have reviewed the statements made in the Official Action dated May 29, 2003, and the Applicants respectfully submit that none of the above-referenced prior art, either alone or in combination, teaches or suggests at least the feature of a hard-carbon coating containing silicon and phosphorus. It appears that the Official Action is relying on Kujimiya to teach “trace contaminants.” The Official Action dated December 5, 2002, asserts that Kujimiya teaches films including “amounts of boron or phosphorus” (page 8, Paper No. 22). However, Kujimiya, either alone or in combination with any of the above-referenced prior art, does not teach or suggest at least a hard-carbon coating containing silicon and phosphorus.

Since the prior art does not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) is in order and respectfully requested.


Paragraph 14 of the Official Action dated December 5, 2002, provisionally rejects claims 8-14, 22-28, 36-42, 50-56, 58, 60, 69, 71-78, 80, 82-89, 91, 93-100, 102, 104-111, 113, 115-122, 124, 126-133, 135, 137-144, 146, 148-155, 157, and 159-167 under the doctrine of obviousness-type double patenting over the claims of U.S. Patent No. 6,171,674 to Yamazaki et al. As stated in MPEP § 804, under the heading “Obviousness-Type,” in order to form an obviousness-type double patenting rejection, a claim in the present application must define an invention that is merely an obvious variation of an invention claimed in the prior art patent, and the claimed subject matter must not be patentably distinct from the subject matter claimed in a commonly owned patent. Also, the patent principally underlying the double patenting rejection is not considered prior art.

The Applicants respectfully traverse the obviousness-type double patenting rejection because the independent claims of the present invention are patentably distinct from the claims of Yamazaki. Specifically, as noted above, the independent claims of the present invention that a hard-carbon coating contains silicon and phosphorus. Yamazaki does not teach or suggest this feature of the present invention.

The Official Action dated May 29, 2003, asserts that "the claims of US 6,171,674 [Yamazaki] actually recite the same limitations concerning Si and P in some of the claims" (page 2, Paper No. 26). The Applicants respectfully disagree. None of the claims of Yamazaki teach or suggest a hard-carbon coating containing silicon and phosphorus. The Applicants respectfully submit that the subject application is patentably distinct from the Yamazaki patent. Reconsideration of the obviousness-type double patenting rejection is requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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